

(Copy.)

Coining Office, Branch Mint
New Orleans, June 23^d 1840.Joseph M. Kennedy Esq
Supt. U. S. Br. Mint.

Dear Sir,

In answer to your letter of Saturday last, I am sorry to say that the gold ingots will not work in the ordinary way. At the time of receiving the ingots, I was informed by the M. & R. that they had been annealed & hammered, and afterwards, annealed & pickled by himself, and that they were ready for rolling. Upon this authority, I thought I would roll some of them without first annealing them myself; but in attempting to straighten them from the crooks they had received in hammering, one ingot was accidentally broken, which led me to suppose the others were equally brittle. I then tried them by striking across the corner of the anvil, and some of them broke with almost the brittleness of glass. I then took 5 ingots indiscriminately from the lot, and pass'd them 6 times through the rolls, giving them one ⁸⁰⁰ of a turn of the keys at each time, stretching them in length about 2 inches in all. At the very first time¹ passing them through, the cracks could be seen very plain, which continued opening wider until the 6th. time, when they had not lengthened more than 2 inches; (notwithstanding the Director informs that they should be successively rolled to the length of 2 feet 4 or 5 inches before annealing the second time.) Four or five more were then rolled in your presence, with the same result, after which I received your note above mentioned.

4/ Not feeling satisfied to report upon them without trying some of my own annealing, I stated the same to you, and received in answer, your request to make further trial. I then took 3 ingots and marked them Nos. 1, 2 & 3 which I annealed and rolled as follows, No. 1, not hammered, annealed at nearly red, - dipped in pickle, passed 11 times through the rolls, giving in all, half a turn of the keys, and drawing about 2 inches in length; cracked on the surface; - annealed again at the same heat, pickled, rolled 4 times through; drawn 1 inch, cracked too bad to finish. No. 2, hammered by M. & B., annealed at lowest red heat, rolled same as No. 1, pickled, rolled again 4 times, drawn 1 inch, cracked same as No. 1. - No. 3, hammered by my foreman, annealed at cherry red, pickled and rolled same as Nos. 1 & 2, annealed at the same heat as at first, pickled, rolled 4 times, cracked the same as Nos. 1 & 2, - rolled 6 times, cracked more at each time.

I then took 4 ingots and rolled them to the usual length of 30 inches, at which length the cracks on the sides had nearly disappeared or drawn over each other, but the edges were quite rough. - I then selected the worst and the best of the four, and annealed them at a moderate heat, then rolled them to the proper length for drawing. The worst is entirely unfit for coins. The best would be subject to great waste in drawing; and if it could be drawn to the proper weight, many of the pieces would be imperfect. - I wish you to examine the pieces with which the experiments were made, and if convenient, I should like you to witness some of the experiments as above. If then you should

5.

CHD 79

request me to make as much of it as possible into coins
I will cheerfully do so, notwithstanding the great
waste which must necessarily occur.

Very respectfully
Your faithful servant
(Signed) P. B. Tyler.

No. 2. (copy)

United States Branch Mint,
New Orleans-Coining Office July 15, 1840

To / J. M. Kennedy Esq
Superintendent
Sir,

Agreeable to your request, I have worked as
far as practicable the gold in my possession, and find
that the experiments reported to you, were a fair test of its
ductility. About one half was rejected in the first operation
of rolling; the best of the remainder being selected in the
subsequent operations, there remained sufficient to make
about \$8000., which was attended with much trouble
and waste through every operation.

Very respectfully
Your faithful servant
(Signed) P. B. Tyler.